

Knowing the Odds



Some poker players love math. They calculate the odds of complex hand situations just for fun. Others have flashbacks to high school algebra and loathe the whole process, preferring to rely more on situational decisions, reads of players, and instinct.

However, even the most resolute mathphobe needs to commit to memory a few key odds so that they can make good bet sizing and calling decisions. The diagrams below summarize some key odds that every player needs to know, from the odds of getting certain starting hands to how those hands can play out over the flop, turn, and river. These odds are grouped according to the most critical hole card combinations: Pairs, Suited Cards, Connected Cards, and Broadway Cards. However, many of these odds are applicable to wider situations: the odds of pairing 8-3 off-suit on the flop are the same as pairing A-K, so you can apply the odds we present for Broadway cards to other non-Broadway holdings as well.

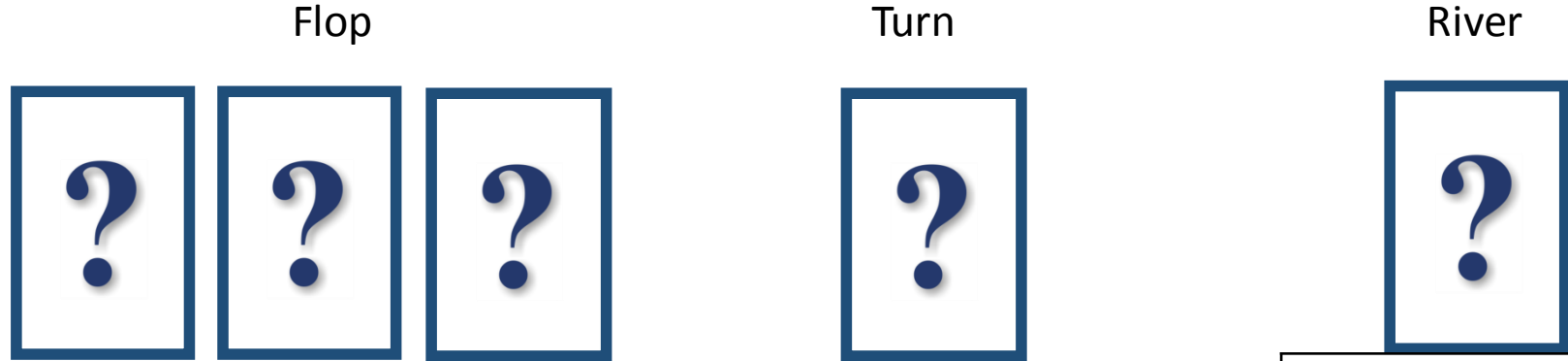
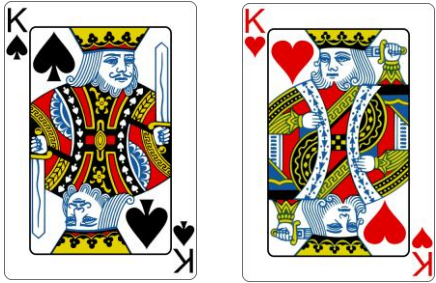
Of course, if you are voluntarily entering pots with 8-3 off-suit very often, we should have a broader discussion!

PAIRS

Key Facts:

- 1) You are dealt a pair in less than 6% of hands
- 2) You are dealt pocket Aces, less than half of a percent of the time (1 out of every 221 hands)
- 3) You'll flop a set or better with a pocket pair about 12% of the time (a little worse than 1 time out of 8)
- 4) If you get all the way to the river, you'll hit a set or better about 1 in every 5 times

Starting Hand Example



Any Pair (all AA through 22)	16 to 1 (5.9%)
Specific Pair (Just AA, KK, QQ, etc.)	220 to 1 (0.45%)

Exactly a Set	8.3 to 1 (10.8%)
Full House (either by hit set with pocket pair and paired board or trips on flop)	101 to 1 (0.98%)
Quads	407 to 1 (0.25%)
Set, Full House, or Quads on flop	7.3 to 1 (12.0%)

Full House or better (from set on the flop)	5.7 to 1 (14.9%)
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Set or better by river (seeing all 5 community cards, excluding straights and flushes)	3.7 to 1 (21.1%)
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Full House or better (from set on the flop and seeing turn and river)	2.0 to 1 (33.3%)
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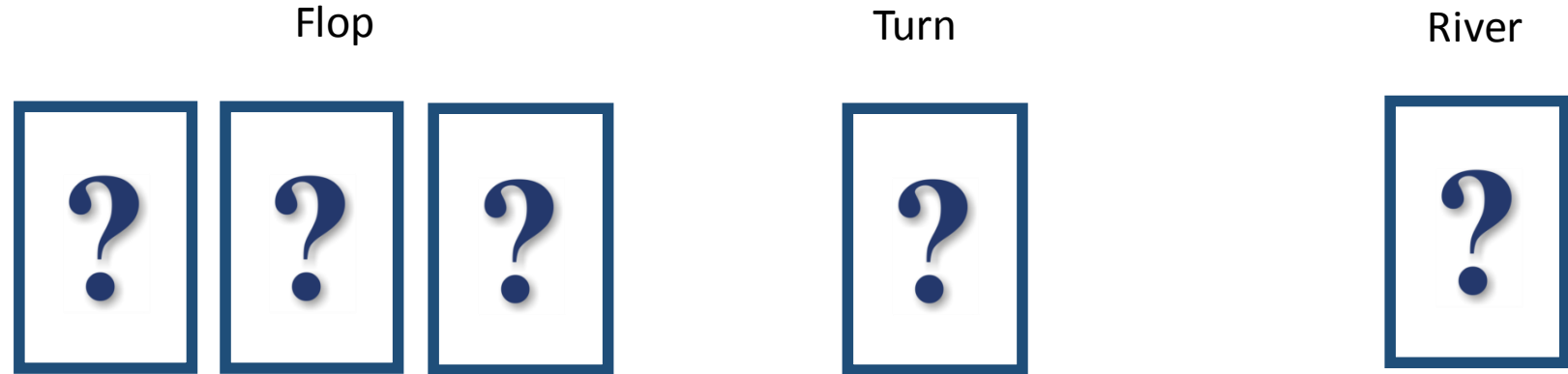
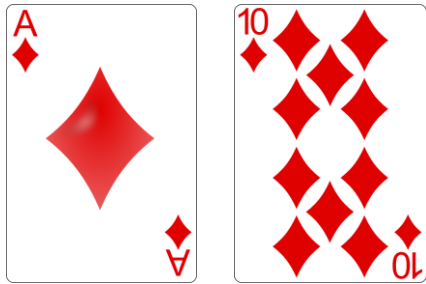
Full House or better (from having set on flop or turn)	3.6 to 1 (21.7%)
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Suited Cards

Key Facts:

- 1) With two suited cards, you have less than 1% chance of flopping a flush and just over 6% of making a flush by the river
- 2) A flush draw on the flop makes the flush on turn about 1 in 5 times, and by the river (if both turn and river are seen) about 1 in 3 times
- 3) A backdoor flush draw on the flop, needing runner-runner of the suit on the turn and river, will only get there 4% of the time

Starting Hand Example



AK Suited (or any two specific suited cards)	331 to 1 (0.30%)
Any Suited A	26.8 to 1 (3.6%)
Any two Suited cards	3.3 to 1 (23.5%)
Suited Connectors (no gap)	24.5 to 1 (3.9%)
Suited Cards 10 or better (connected or not)	32.2 to 1 (3.0%)

Flush (including straight flush)	118 to 1 (0.84%)
Flush Draw	8.1 to 1 (11.0%)
Backdoor Flush Draw	1.4 to 1 (41.7%)

Flush	4.2 to 1 (19.1%)
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Flush by river (seeing all 5 community cards)	15 to 1 (6.4%)
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Flush by river (from flush draw on flop if see both turn and river)	1.9 to 1 (35.0%)
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Flush on draw after missing turn	4.1 to 1 (19.6%)
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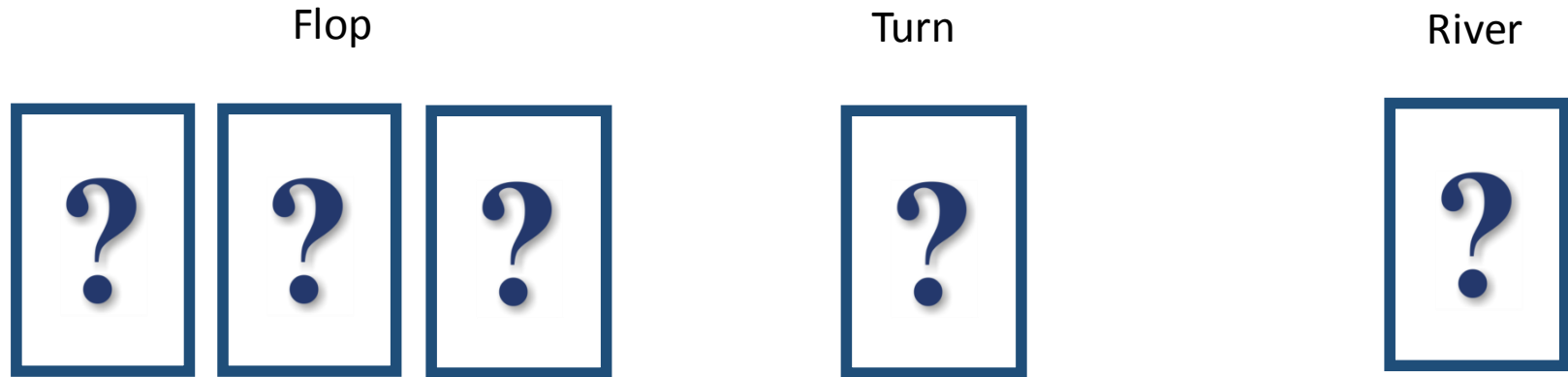
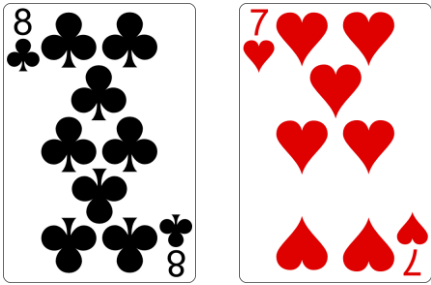
Flush by river on Backdoor Draw on flop	23 to 1 (4.2%)
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Connected Cards

Key Facts:

- 1) With two connected cards 5 through J, you have slightly more than 1% chance of flopping a straight and just over 8% of making a straight by the river
- 2) An open ended straight draw on the flop makes a straight on the turn about 1 in 6 times, and by the river a little less than 1 in 3 times
- 3) A gut-shot straight draw on the flop makes the straight on the turn about 1 in 12 times, and by the river about 1 in 6 times

Starting Hand Example



Any Connected Cards (no gap)	5.4 to 1 (15.7%)
Connected Cards both 10 or better (no gap)	19.7 to 1 (4.8%)
Connected Cards 5-4 through J-10	10.9 to 1 (8.4%)

Straight (for connected cards 5-4 through J-10 including straight flushes)	76 to 1 (1.3%)
Open Ended Straight Draw	9.2 to 1 (9.8%)
Gut-Shot Straight Draw	3.6 to 1 (21.6%)

Straight	4.9 to 1 (17.0%)
Straight	10.8 to 1 (8.5%)

Straight by river (seeing all 5 community cards and with 5-4 through J-10 starting hands)	11 to 1 (8.4%)
Straight by river (from open ended draw on flop if see both turn and river)	2.2 to 1 (31.5%)
Straight by river (from gut shot draw on flop if see both turn and river)	5.1 to 1 (16.5%)

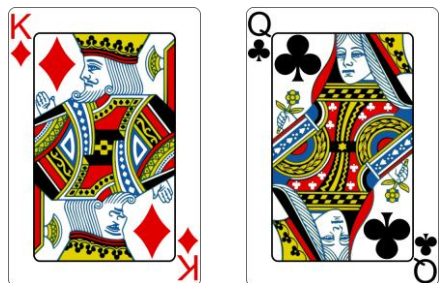
Broadway Cards



Key Facts:

- 1) With your two unpaired hole cards you will miss the flop twice for every time you hit it
- 2) Flopping a full house from unpaired whole cards is a near miracle, a less than a 1 in 1,000 event
- 3) If you flop two pair with both of your hole cards, you will make a full house 1 in 12 times on the turn and 1 in 6 times by the river
- 4) Overcards will pair the board about 1 in 8 times on the turn after missing the flop

Starting Hand Example



Flop



Turn



River



AK Offsuit	110 to 1 (0.90%)
AK Suited or Offsuit	82 to 1 (1.2%)
Any Two Cards with both at least rank of Queen	19.1 to 1 (5.0%)
Any Two Cards with both at least rank of Jack	10.1 to 1 (9.1%)
Any Two Cards with both at least rank of Ten	6.0 to 1 (14.3%)

Assuming unpaired hole cards

At least one pair (using one of hole cards)	2.1 to 1 (32.4%)
Exactly one pair (using one of hole cards)	2.7 to 1 (27.0%)
Exactly two pair (using one or both hole cards)	24 to 1 (4.0%)
Exactly Trips (using one of hole cards)	74 to 1 (1.3%)
Full House (using both pocket cards)	1087 to 1 (0.09%)

Full House	10.8 to 1 (8.5%)
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Full House by river (from two pair on flop and seeing turn and river)	5.1 to 1 (16.4%)
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Full House (after missing draw on turn)	10.5 to 1 (8.7%)
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Making a pair from one hole card (e.g., overcards to board) if missed the flop	6.8 to 1 (12.8%)
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Making a pair on river from one hole card (e.g., overcards to board) if missed the flop and turn	6.7 to 1 (13.0%)
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Making a pair on turn OR river from one hole card (e.g., overcards to board) if missed flop	3.1 to 1 (24.1%)
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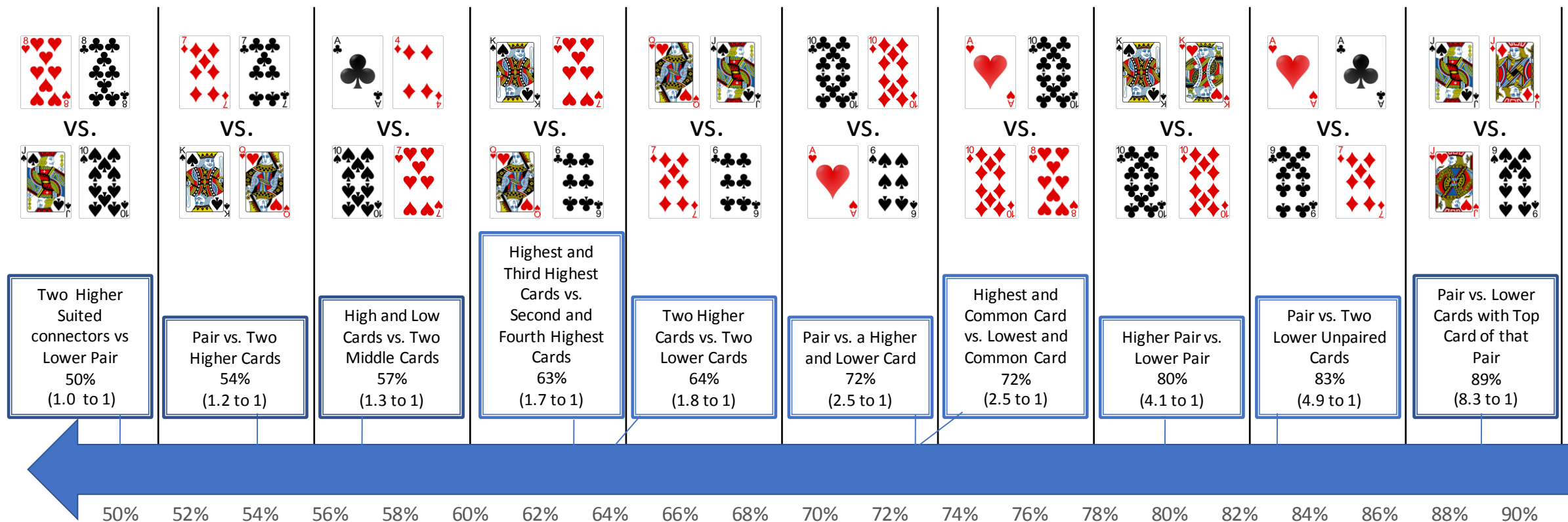
How Dominant Are You Preflop?



Key Facts:

- 1) A pair against two overcards is the classic “race” with the pair a slight favorite in most cases
- 2) A lower pair will beat a higher pair about 1 in 5 times
- 3) Two unpaired higher cards versus two unpaired lower cards is less than a 2 to 1 favorite. That’s right: 2-7 off will beat AK suited about 1 time out of 3
- 4) Having a high pair against two unpaired lower cards is generally the strongest All-In scenario

EXAMPLE HANDS*



*Note: the percentages given are for the example hands shown; for other similar hands, the percentages may vary slightly.